

REMARKS

Reconsideration and withdrawal of the outstanding grounds of objection and/or rejection are respectfully requested in light of the above amendments and the remarks which follow.

The Examiner has objected to the drawings under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims. Specifically, the Examiner contends that the multiple layers of the field coil "having a pair of ends connected by a pair of longitudinal sides that are 'adapted' to be received within elongated slots formed in the electromagnetic rotor" must be shown with the feature cancelled from the claims.

Attention is drawn to Figure 1 and to the accompanying text on page 3 that indicates that the multiple layers or windings 12 each have longitudinal sides 14 and 16 along with ends 18 and 20 that are connected by the sides. As shown, they are in fact adapted to be received within elongated slots formed in the electromagnetic rotor. It is not at all apparent why the intended use of language must be reflected in the drawings. Nevertheless, in order to resolve the issue, applicant proposes to add a new Figure 3 that illustrates how the windings are received within a rotor slot. No new matter issues are raised by the addition of Figure 3.

The Examiner has rejected claims 1 and 3-9 under 35 U.S.C. 112, first paragraph, as containing subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention. Specifically, the Examiner contends that there is no adequate

written description of the layers each having a pair of ends connected by a pair of longitudinal sides that are adapted to be received within elongated slots formed in the electromagnetic rotor.

It is respectfully submitted that the addition of Figure 3 and accompanying text overcomes the rejection.

The Examiner has rejected claims 1, 3-9 and 18 under 35 U.S.C. 112, second paragraph as indefinite. The Examiner contends that the term "adapted to" is not a positive limitation but only requires the ability to so perform. The Examiner's position here that the language following "adapted to" is not a positive structural limitation and "does not constitute a limitation in any patentable sense" is curious in light of the Examiner's requirement that that very structure be shown in the drawings as a "feature of the invention specified in the claims." In any event, the language is clearly not indefinite as suggested by the Examiner. It is clear from the specification and drawings (including new Figure 3) that the field coil windings or layers are in fact adapted to be received within elongated slots formed in the electromagnetic rotor. There is nothing indefinite about this language and whether or not the Examiner regards it as a patentable limitation is irrelevant with respect to whether or not the language is definite under 35 U.S.C. 112, second paragraph. It is respectfully submitted that this rejection is improper and should be withdrawn.

The Examiner has also rejected claims 1-9 and 18 under 35 U.S.C. 103 as unpatentable over Blaettner in view of Japan '606. According to the Examiner, it would

have been obvious to one of ordinary skill in the art to use the coating composition of Japan '606 in the Blaettner structure.

At the outset, the Examiner refers to element 26 in Blaettner as a coil and apparently relies on that same structure as providing response for the claimed windings. In fact, as applicant has previously pointed out, the armature 26 is comprised of a core 28 made up of a series of laminations 30, each of which comprises a yoke portion 133 and a plurality of lamination teeth 134 extending radially away from the yoke. These lamination teeth define radial slots 128 between adjacent teeth as best seen in Figures 4B and 5. After the core 28 and shaft 32 are assembled, magnet wire 125 is wound in the slots 128. This construction is very much unlike the arrangement required by the independent claims in this application. For example, claim 1 requires the field coil be comprised of multiple layers, the layers each having a pair of ends connected by a pair of longitudinal sides that are adapted to be received within radial slots formed in the electromagnetic rotor. There are no such ends connected by longitudinal sides in Blaettner. Moreover, the Examiner has acknowledged that the "adapted to" language requires the ability of the structure to perform the intended function. Here, the generally cylindrical core 28 of Blaettner is clearly not adapted to be received within radial slots formed in an electromagnetic rotor. In addition, the windings in Blaettner comprise the magnet wire 125 wound in the slots 128 of the armature 26. Stated otherwise, Blaettner does not disclose the claimed field coil construction as recited in any of the independent claims of this application.

In addition, to the extent that Blaettner's core 28 is analogous to an electromagnetic rotor, there is a significant difference in that Blaettner discloses an insulating coating of epoxy resin 132 applied to the laminations 30 of the core, the shaft 32 and the spacer 126, not to the winding wire 125. In contrast, the claimed invention relates to the layers or windings themselves that are received within the radial slots of an electromagnetic rotor, with the layers or windings each substantially entirely coated with a powder resin having a dielectric strength of at 1000 v/mil.

With regard to the secondary reference, applicant again points out that the Examiner has assumed that a reference to enhance dielectric strength provides evidence of obviousness with respect to the specific requirements in claims 1, 9 and 18 that the coating have a dielectric strength of at least 1000 v/mil. The Examiner's conclusion is not based on any facts evident from that reference, and moreover, the Examiner has not demonstrated that the '606 reference disclosure of enhanced dielectric strength is in fact superior to the dielectric strength associated with Blaettner's epoxy resin 132. In this regard, the Examiner contends that applicant has acknowledged that the materials used by both Blaettner and Japan exhibit the claimed characteristics. Applicant has made no such acknowledgement.

With regard to claim 3, the Examiner contends that it would have been obvious to one of ordinary skill in the art not to coat the end connections of the winding in order to provide a good electrical connection. Here again, the Examiner assumes facts not in evidence. For example, a common practice is to coat the end connections and then


IRWIN et al.
Serial No. 09/552,310
March 18, 2003

subsequently remove the coating to the extent required for attachment of the conductor to the electrical system. The Examiner now contends that applicant has "not precluded that the coating on the ends of the connection can be removed therefrom." The Examiner's point is not at all relevant to the subject matter of claim 3 which requires the electro-connector portions of the field not be coated. The question then is whether or not it would have been obvious not to coat those portions and not whether or not the coating could subsequently be removed.

It is respectfully submitted that all of the application claims are in condition for immediate allowance, and therefore, entry of the response is consistent with 37 CFR 1.116(b). In the event any small matters remain outstanding, the Examiner is encouraged to telephone the undersigned so that the prosecution of this application can be expeditiously concluded.

Respectfully submitted,

NIXON & VANDERHYTE P.C.

By: 
Michael J. Keenan
Reg. No. 32,106

MJK:ljb
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100